



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,065	12/11/2001	Kazuhiro Nukiyama	0941.66047	7260

7590 07/12/2006

Patrick G. Burns, Esq.
GREER, BURNS & CRAIN, LTD.
Suite 2500
300 South Wacker Dr.
Chicago, IL 60606

EXAMINER

MENGISTU, AMARE

ART UNIT	PAPER NUMBER
----------	--------------

2629

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,065

Applicant(s)

NUKIYAMA ET AL.

Examiner

Amare Mengistu

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-5,9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a. The specification as originally filed does not disclose the newly recited claim 1 “***wherein the adjustment of the phase relationship is carried out for the purpose of eliminating phase difference of a signal disposed at a different position in the data driving part***”. The specification as first filed has failed to teach one skill in the art how to make or use applicant’s claimed invention.

b. The specification as filed has also failed to disclose the newly added claim limitation to claim 9 “***wherein the timing correcting part makes the clock signal and image display signal supplied by the control part have a predetermined phase relationship there between to eliminate a phase difference of a signal disposed at a different position in the data driving part***”. Thus, the applicant’s specification has failed to enable one of ordinary skill in the art at the time of filing to practice applicant’s invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5,9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Murata et al (6,144,355)** in view of **Tanaka et al (4,713,691)**.

As to claims 1, 2,9, **Murata et al** discloses a liquid crystal display comprising: a plurality of data driving part (fig.4 (24)) taking in image display data in response to a clock signal supplied (col.7, lines 9-21, see, Fig.4 (Data(R), Data (G), Data (B)), Clock (CK, ST)) and causing an image display part to display an image according to the image display data (col.7, lines 13-24); and a control part (figs.1 (10)) adjusting a phase relationship between the clock signal and image display data (col.3, lines 42-48, 64- col.4, lines 5, lines 13-20), a timing correction part (fig.1(14)) provided in each of said plurality of data driving parts, and making the clock signal and image display data supplied by said control part have Predetermined phase relationship there between (col.3, lines 64- col.4, lines 7, col.5, lines 27-37),

Murata et al did not explicitly disclose that the control part detecting a change pattern of the image display data, and adjusting a phase relationship between the clock signal and image display data.

However, **Tanaka et al** suggests a control part detecting a change pattern of the image display data, and adjusting a phase relationship between the clock signal and image display data according to the detected change pattern (see, Abstract, col.1, lines 48-68, col.3, lines 1-5,20-33).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have incorporated the change detecting method of **Tanaka et al** in to the LCD system of **Murata et al**, because this will provide a stable sampling can be attained even for a high frequency video signal by setting the optimum delay quantity according to the detected delay quantity.

As to claim 3, **Tanaka et al** discloses that the control part delays only the image display data having a logical levels changing for each clock period of the clock signal (col.1, lines 49-68, col.3, lines 7-33).

In regard to claim 4, **Tanaka et al** also disclose that the control part delays the clock signal (see, Abstract, fig.1 (7,8,9), col.2, lines 45-52).

AS to claim 5, **Tanaka et al** furthermore teaches control part detects the frequency of the clock signal, and adjusts the phase relationship between the clock signal and image data signal according to the detected frequency as well as the detected change pattern (Abstract, col.1, lines 60-68,col.3, lines 24-33, col.4, lines 4-7).

As to claim 10, **Murata et al** teaches that said control part (fig.1 (10)) detects signal transmission time periods required toward the data driving parts, generates a correction signal according to the detected data transmission time periods to be sent to said timing correcting part; and said timing correcting part makes the clock signal and image display data have the predetermined phase relationship there between according to the supplied correction signal (col.3, lines 42-47, col.3, lines 64- col.4, lines 7).

As to claim 11, **Murata et al** also teaches that control part supplies a monitoring data signal common for the timing correcting parts; and each of the timing correcting parts detects a phase difference between the thus-supplied monitoring data signal and the clock signal, and, thereby, make the clock signal and image display data have the predetermined phase relationship there between (col.3, lines 42-47, col.3, lines 64- col.4, lines 7).

Response to Arguments

3. Applicant's arguments filed on April 18, 2006 have been fully considered but they are not persuasive.
4. Applicant states that the specification as originally filed has support for the claim limitation of "***herein the adjustment of the phase relationship is carried out for the purpose of eliminating phase difference of a signal disposed at a different***

Art Unit: 2629

position in the data driving part” and indicates to see page 39, lines 20-31 for the support in the specification. However, the Examiner still could find support on page 39, lines 20-31 in the specification for the above claim limitation ***“herein the adjustment of the phase relationship is carried out for the purpose of eliminating phase difference of a signal disposed at a different position in the data driving part*”**.

The recitation of the claim adjustment ***of the phase relationship....*** could not be found in the specification.

Further more, the same for the recitation of the claim ***“wherein the timing correcting part makes the clock signal and image display signal supplied by the control part have a predetermined phase relationship there between to eliminate a phase difference of a signal disposed at a different position in the data driving part”***. Here again, the specification does not provide support for the recitation of the claim ***“wherein the timing correcting part makes the clock signal and image display signal supplied by the control part....”***.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

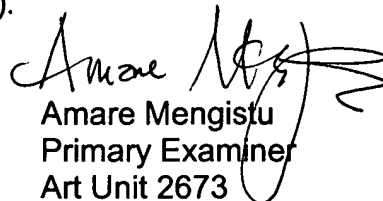
Art Unit: 2629

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (703) 305-4880. The examiner can normally be reached on M-F, T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amare Mengistu
Primary Examiner
Art Unit 2673

A.M

Application/Control Number: 10/015,065
Art Unit: 2629

Page 8

July 8, 2006